## **CLAIMS**

## What is claimed is:

- 1. An antibody or antigen-binding fragment thereof, which binds to a mammalian GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
  - 2. The antibody or antigen-binding fragment of Claim 1 wherein said mammalian GPR-9-6 is human GPR-9-6.
  - 3. The antibody or antigen-binding fragment of Claim 1 wherein said ligand is TECK.
- The antibody or antigen-binding fragment of Claim 1 wherein the binding of said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by a peptide that consists of the amino acid sequence of SEQ ID NO:3.
- 5. The antibody or antigen-binding fragment of Claim 1 wherein the binding of said antibody or said antigen-binding fragment to GPR-9-6 can be inhibited by mAb 3C3.
  - 6. The antibody or antigen-binding fragment of Claim wherein said antibody or antigen binding fragment binds to the same or a similar epitope as mAb 3C3.
  - 7. An antibody produced by murine hybridoma 3C3 or an antigen-binding fragment thereof.

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- 8. An isolated cell which produces an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 and inhibits the binding of a ligand to said GPR-9-6.
- 9. The isolated cell of Claim 8 wherein said mammalian GPR-9-6 is human GPR-9-6.
  - 10. The isolated cell of Claim 9 wherein said ligand is TECK.
- 11. The isolated cell of Claim 10 wherein said isolated cell is selected from the group consisting of an immortalized B cell, a hybridoma and a recombinant cell comprising one or more exogenous nucleic acid molecules that encode said antibody or antigen-binding fragment thereof.
- 12. The murine hybridoma 3C3.
- 13. A method of detecting a mammalian GPR-9-6 or portion thereof by in a biological sample, comprising:
  - a) contacting a biological sample with an antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor and inhibits binding of a ligand to the receptor, under conditions appropriate for binding of said antibody or antigen-binding fragment thereof to a mammalian GPR-9-6 or portion thereof; and
  - b) detecting binding of said antibody or antigen-binding fragment thereof; wherein the binding of said antibody or antigen-binding fragment thereof indicates the presence of said receptor or portion of said receptor.
- 14. The method according to Claim 13, wherein the biological sample is of human origin.

- 15. The method according to Claim 14, wherein the antibody or antigen-binding fragment thereof is selected from the group consisting of:
  - a) mAb 3C3;
  - b) an antibody which can compete with mAb 3C3 for binding to a mammalian GPR-9-6;
  - c) antigen-binding fragments of (a) or (b) which bind a mammalian GPR-9-6 or a portion thereof; and
  - d) combinations of the foregoing.
- 16. A method of detecting and identifying an agent which binds to a mammalian GPR-9-6 or a ligand binding variant thereof comprising combining:
  - a) a reference agent,
  - b) a test agent, and
  - c) a composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof under conditions suitable for binding of said reference agent to said GPR-9-6 or ligand-binding variant thereof; and detecting or measuring the formation of a complex between said reference agent and said GPR-9-6 or a ligand binding variant thereof, wherein, a decrease in the formation of said complex relative to a suitable control indicates that said test agent binds to said GPR-9-6 or to a ligand-binding variant thereof.

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- 17. The method of Claim 16 wherein said reference agent is labeled with a label selected from the group consisting of a radioisotope, an epitope, an affinity label, an enzyme, a fluorescent group and a chemiluminescent group.
- 18. The method of Claim 16 wherein said reference agent is TECK.

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- 19. The method of Claim 16 wherein said reference agent is an antibody which binds to said GPR-9 6 or an antigen-binding fragment thereof.
- 20. The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a cell that expresses a mammalian GPR-9-6.
- 21. The method of Claim 20 wherein said cell is a recombinant cell.
- 22. The method of Claim 20 where a said cell is a cell line.
- 23. The method of Claim 23 wherein said cell is selected from the group consisting of MOLT-4 and MOLT-13.
- The method of Claim 16 wherein said composition comprising a functional mammalian GPR-9-6 or a ligand binding variant thereof is a membrane preparation of a cell that expresses a mammalian GPR-9-6 or a ligand binding variant thereof.
  - 25. A method of detecting or dentifying an inhibitor of a mammalian GPR-9-6 receptor comprising:
    - a) combining an agent to be tested, a ligand or promoter of said GPR-9-6 and a cell expressing said GPR-9-6 under conditions suitable for detecting a ligand- or promoter-induced response; and
    - b) determining the ability of the test compound to inhibit said response, wherein inhibition of a ligand- or promoter-induced response by the agent is indicative that the agent is an inhibitor.

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- 26. The method of Claim 25 wherein said cell is a recombinant cell expressing a human GPR-9-6.
- 27. The method of Claim 26 wherein said ligand or promoter is TECK.
- 28. The method of Claim 25 wherein said response is chemotaxis or Ca<sup>2+</sup> flux.
- A method of treating a subject having an inflammatory disease, comprising administering an effective amount of an antagonist of a mammalian GPR-9-6 function to said subject.
  - 30. The method of Claim 29 wherein said inflammatory disease is Crohn's disease or colitis.
- The method of Claim 29 wherein said antagonist inhibits the binding of a ligand to a mammalian GPR-9-6.
  - 32. The method of Claim 31 wherein said ligand is TECK.
  - 33. The method of Claim 31 wherein said antagonist is an antibody which binds to a mammalian GPR-9-6 or an antigen-binding fragment thereof.
- A method of inhibiting GPR-9-6-mediated horning of leukocytes in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
  - 35. The method of Claim 34 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.

- 36. The method of Claim 35 wherein said ligand is TECK.
- 37. The method of Claim 36 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
- A method of inhibiting GPR-9-6-mediated homing of leukocytes to mucosal tissue in a subject, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
  - 39. A method of treating a subject having an inflammatory bowel disease, comprising administering an effective amount of an antagonist of GPR-9-6 function to said subject.
- 10 40. The method of Claim 39 wherein said antagonist inhibits the binding of a ligand to GPR-9-6.
  - 41. The method of Claim 40 wherein said ligand is TECK.
  - 42. The method of Claim 41 wherein said antagonist is an antibody which binds to GPR-9-6 or an antigen-binding fragment thereof.
- 15 43. A method of modulating a GPR-9-6 function comprising contacting a cell that expresses GPR-9-6 with an agent which binds thereto, thereby modulating the function of said GPR-9-6.
  - 44. The method of Claim 43 wherein said agent can inhibit a function of GPR-9-6.
- The method of Claim 44 wherein said agent is an antibody or antigen-binding fragment thereof.

- 46. The method of Chaim 45 wherein said function is selected from the group consisting of ligand binding, ligand-induced chemotaxis and ligand-induced Ca<sup>2+</sup> flux.
- 47. The method of Claim 46 wherein said ligand is TECK.
- 5 48. A test kit for use in detecting the presence of a mammalian GPR-9-6 or portion thereof in a biological sample comprising
  - a) at least one antibody or antigen-binding fragment thereof which binds to a mammalian GPR-9-6 or portion of said receptor, wherein said antibody or antigen-binding fragment thereof inhibits binding of a ligand to the receptor; and
  - b) one or more ancillary reasonts suitable for detecting the presence of a complex between said antibody or antigen-binding fragment thereof and said mammalian GPR-9-6 or a portion thereof.
- 49. A test kit according to Claim 48, wherein the antibody is selected from the group consisting of
  - a) mAb 3C3;
  - b) an antibody which can compete with mAb 3C3 for binding to mammalian GPR-9-6;
  - c) antigen-binding fragments of (a) or (b) which bind to mammalian GPR-9-6 or a portion thereof; and
  - d) combinations of the foregoing.

ADD AD4

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